US 20180332396A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2018/0332396 A1**

Hernandez Santisteban et al. (43) **Pub. Date: Nov. 15, 2018**

(54) **HINGED COMPUTING DEVICE FOR BINAURAL RECORDING**

(71) Applicant: **Microsoft Technology Licensing, LLC**, Redmond, WA (US)

(72) Inventors: **Adolfo Hernandez Santisteban**, Seattle, WA (US); **John Benjamin George Hesketh**, Kirkland, WA (US)

(21) Appl. No.: **15/593,044**

(22) Filed: **May 11, 2017**

Publication Classification

(51) **Int. Cl.**

H04R 5/027	(2006.01)
H04R 1/04	(2006.01)
H04S 7/00	(2006.01)
G11B 20/10	(2006.01)

(52) **U.S. Cl.**

CPC ***H04R 5/027*** (2013.01); ***H04R 1/04*** (2013.01); ***H04S 7/30*** (2013.01); ***G11B 20/10527*** (2013.01); *H04R 2499/11* (2013.01); *H04S 2420/11* (2013.01); *H04S 2400/15* (2013.01); *G11B 2020/10546* (2013.01); *H04S 2420/01* (2013.01)

(57) **ABSTRACT**

Conventional stereo audio recordings do not factor in natural ear spacing or "head shadow" of a user's head and ears. The hinged computing devices disclosed herein incorporate a pair of microphones that approximate the user's ear-to-ear spacing and orientation, as well as a physical structure that approximates the user's head shadow. A resulting recording of the computing device's environment may be conditioned and reproduced as a binaural stereo audio feed for selective playback to the user or other users.